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PC43  EC 1  (29)   ASTVIHYEIPEEREK------GFAVGNVVANL--GLDLGSLSA--       (63)
      EC 2  (136)  PTQEMKLEISEAVAP------GTRFPLESAH---DPDLGSNSL--       (169)
      EC 3  (245)  NQSLYRARVPGGCTS-----GTRVVQVLAT---DLDEGPNGE--       (278)
      EC 4  (353)  TVTSVYSPVPEDAS------GTVIALLSVT---DLDAGENGL--       (385)
      EC 5  (457)  SQSSYDVYIEENNLP-----GAPILNLSVW---DPDAPQNAR--       (490)
      EC 6  (567)  LYPRPGGSSVEMLPRGTSA-GHLVSRVVGW---DADAGHNAW--       (604)

PC42  EC 1  (42)   VPEEQPPNTLI---------GSL------AADYGFPDVG-           (65)
      EC 2  (147)  ASPVITLAIPENTNI-----GSLFPIPLAS---DRDAGPNGV--       (180)
      EC 3  (247)  ERPSYEAELSENSPI-----GHSVIQVKAN---DSDQGANAE--       (280)
      EC 4  (354)  EIRGIGLVTHQDGMANISEDVAEETAVALVQVSDRDEGENAA--       (395)
      EC 5  (473)  TQSVTEVAFPENNKP-----GEVIAEITAS---DADSGSNAE--       (506)
      EC 6  (579)  MLSGYNFSVMENMPA-----LSPVGMVTVI---DGDKGENAQ--       (612)
      EC 7  (682)  TAPSNTSHKLLTPQTRL---GETVSQVAAE---DFDSGVNAE--       (717)

FAT   EC18  (1)    EDTVYSFDIPENAQR-------GYQVGQIVAR---DADLGQNAQ--     (34)

N-CAD EC 1  (1)    DWVIPPINLPENSRG-------PFPQELVRIRS--DRDKNLSLRYT      (37)
      EC 2  (109)  LHQVWNGSVPEGSKP-----GTYVMTVTAI---DADDPNALNGM       (144)
      EC 3  (224)  TAMTFYGEVPENRVD-----IIVANLTVT----DKDQPHTPAWN       (258)
      EC 4  (339)  APNPKIIRQEEGLHA-----GTMLTTFTAG---DPDRYMQQN--       (372)
      EC 5  (447)  LPQEAETCETPDPNSINITTAL-----------DYDIDPNAGP--       (478)

MOTIF       ****o****v*En***-----Gt*v*v*A*---D*D*g*N**--
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FIGURE 1A

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PC43   EC 1  (64)   RRFPVVSGASRR------FFEVNRET----GEMFVNDR----  (91)
       EC 2  (170)  QTYELSRNEY------FALRVQTREDSTKYAELVLERA--  (201)
       EC 3  (279)  IIYSFGSHNRAGVRQL--FALDLVT--GMLTIKGR----  (309)
       EC 4  (386)  VTCEVPPGLP------FSLTSSLKNYFTLKTSAD----  (413)
       EC 5  (491)  LSFFLLEQGAETGLVGRYFTINRDN----GIVSSLVP----  (523)
       EC 6  (605)  LSYSLFGSPNQSL-----FAIGLHT-----GQISTARPV----  (633)

PC42   EC 1  (66)   HLYKLEVGAP-------YLRVDGKT----GDIFTTETS---  (92)
       EC 2  (181)  ASYELQVAED-------QEEKQPQLIVMGN----------  (203)
       EC 3  (281)  IEYTFHQAPEVVRRL--LRLDRNT----GLITVQGP----  (310)
       EC 4  (396)  VTCVVAGDVP--------FQLRQASETGSDSKKKYFLQTTTP  (429)
       EC 5  (507)  LVYSLEPEPAAKGL----FTISPET----GEIQVKTS----  (535)
       EC 6  (613)  VQLSVEQDNGD------FVIQNGT----GTILSSLS----  (638)
       EC 7  (718)  LIYSIAGGNPYGL-----FQIGSHS-----GAITLEKE----  (745)

FAT    EC18  (35)   LSYGVVSDWANDV------FSLNPQT-----GMLTLTAR----  (62)

N-CAD  EC 1  (38)   VTGPGADQPPTGI-----FIINPIS-----GQLSVTKP---  (65)
       EC 2  (145)  LRYRILSOAPSTPSPNM-FTINNET----GDIITVAAG---  (177)
       EC 3  (259)  AVYRISGGDPTGR-----FAIQTDPNSND-GLVTVVKP---  (290)
       EC 4  (373)  IRYTKLSDPAN------WLKIDPVN----GQITTIAV----  (399)
       EC 5  (479)  FAFDLPLSPVTIKRN---WTITRLN-----GDFAQLNLK---  (509)

MOTIF                I*O*I*********O*I***T-----G*I*T***---
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FIGURE 1B

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PC43  EC 1  (92)   LDREELCGTLPSCTVTLELVVENP----------LELFSVEVVIQDINDNNPAF  (135)
      EC 2  (202)  LDREREPSLQLVLTALDGGTPAL-----------SASLPIHIKVLDANDNAPVF  (244)
      EC 3  (310)  LDFEDTKLHEIYIQAKDKGANPE-----------GAHCKVLVEVDVDNDNAPEI  (352)
      EC 4  (414)  LDRETVPEYNLSITARDAGTPSL-----------SALTIVRVQVSDINDNPPQS  (456)
      EC 5  (524)  LDYEDRREFELTAHISDGGTPVL-----------ATNISVNIFVTDRNDNAPQV  (566)
      EC 6  (634)  QDTDSPRQTLTVL-IKDNGEPSLSTTATLTVSVTEDSPEARAEFPSGSAPREQKKN  (688)

PC42  EC 1  (93)   IDREGLRECONQLPGDPCILEFEVSITDLVQNAS--PRLLEGQIEVQDINDNTPNF  (146)
      EC 2  (204)  LDRERWDSYDLTIKVQDGGSPPR-----------ATSALLRVTVLDTNDNAPKF  (246)
      EC 3  (311)  VDREDLSTLRFSVLAKDRGTNPK-----------SARAQVVTVKDMNDNAPTI  (353)
      EC 4  (430)  LDYEKVKDYTIEIVAVDSGNPPL-----------SSTNSLKVQVDVDNDNAPVF  (472)
      EC 5  (536)  LDREQRESYELKVVAADRGSPSL-----------QGTATVLVNVLDCNDNDPKF  (578)
      EC 6  (639)  FDREQQSTYTFQLKAVDGGVPPR-----------SAYVGVTINVLDENDNAPYI  (681)
      EC 7  (746)  IERRHHGLHRLVVKVSDRGKPPRYGTALVHLYVNETLANRTLLETLLGHSLDTPLD  (801)
            (802)  IDIAGDPEYERSKQRGN  (818)

FAT   EC18  (63)   LDYEEVQHYILIVQAQDNGQPSL-----------STTITVVCNVLDLNDNAPIF  (105)

N-CAD EC 1  (66)   LDREQIARFHLRAHAVDINGNQV-----------ENPIDIVINVIDMNDNRPEF  (108)
      EC 2  (178)  LDREKVQQYTLIIQATDMEGNPTYGL---------SNTATAVITVTDVNDNPPEF  (223)
      EC 3  (291)  IDFETNRMFVLTVAAENQVPLAKGIQHPP------QSTATVSVTVIDVNE-NPYF  (338)
      EC 4  (400)  LDRESPNVKNNIYNATFLASDNGIPPM--------SGTGTLQIYLLDINDNAPQV  (446)
      EC 5  (510)  IKFLEAGIYEVPIITDSGNPPKSNKS---------ILRVRVCQCDFNGDCTDVDR  (557)

MOTIF        LDRE*****Q*L*v*A*D*G*P**-----------**T*Tv*v*V*D*NDNAP*F
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FIGURE 1C